

# Human CSNK1A1 / CKI-alpha / CK1 Protein (GST Tag)

Catalog Number: 10668-H09B



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CK1; CK1a; CKIa; HEL-S-77p; HLCDGP1; PRO2975

### Protein Construction:

A DNA sequence encoding the full length of human CSNK1A1 isoform 1 (P48729-1) (Met 1-Phe 337) was expressed with the GST tag at the N-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Bio Activity:

**The specific activity was determined to be 30 nmol/min/mg using casein as substrate.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human CSNK1A1/GST chimera consists of 561 amino acids and predicts a molecular mass of 65.2 kDa. It migrates as an approximately 62 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 2mM GSH, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

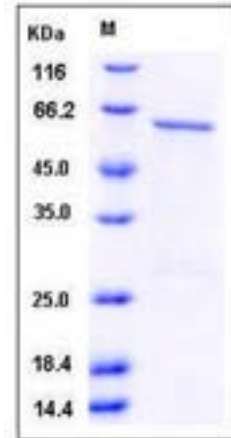
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Casein kinase I isoform alpha, also known as CKI-alpha, CK1 and CSNK1A1, is a cytoplasm protein which belongs to the protein kinase superfamily, CK1 Ser/Thr protein kinase family and casein kinase I subfamily. Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates. High expression of CSNK2A1, or concomitantly high expression of CSNK2A1, are independent prognostic factors of poor survival in NSCLC patients. CSNK2A1 are useful prognosis markers in non-small cell lung cancer (NSCLC) patients after complete resection, independent of lymph node metastasis status. CSNK1A1 can phosphorylate a large number of proteins. It participates in Wnt signaling. It phosphorylates CTNNB1 at 'Ser-45'. CSNK1A1 may play a role in segregating chromosomes during mitosis.

## References

1. Dubois, et al., 2002, FEBS Lett. (Netherlands) 517 (1-3): 167-71.
2. Dubois, T et al., 2001, J. Biol. Chem. (United States) 276 (22): 18757-64.
3. Zhang, Yi et al., 2002, J. Biol. Chem. 277(20): 17706-12.

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